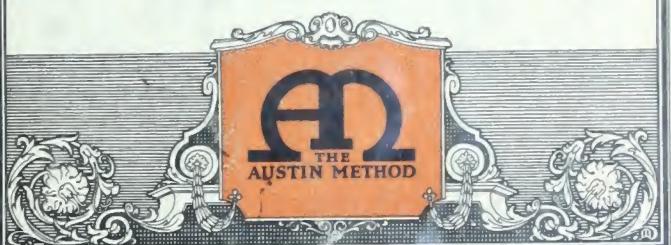


# BUILDING FOR BIG INDUSTRIES

ENGINEERING, ARCHITECTURE,  
BUILDING AND EQUIPMENT



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Austin Company.  
Building for big  
industries.

UNIVERSAL PICTURES CO., INC.  
RESEARCH DEPT.

Mr. Walter L. Stern



The Austin Company of California  
ENGINEERS AND BUILDERS

Austin Standard Industrial Buildings  
Warehouse and Commercial Structures  
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INC.





PLATE I

Nela Park, the headquarters of the National Mazda Lamp Works of the General Electric Company in Cleveland, Ohio. This group includes the buildings for administration, sales, and scientific research and development work involved in the development of National Mazda lamps. It has the reputation of being the finest group of industrial administration buildings in this country. The Austin contracts included the buildings, roads, retaining walls, the pool, the interconnecting underground tunnels, power plant, and all of the mechanical equipment including heating, ventilation, plumbing, and fire protection.

**A**  
THE  
AUSTIN METHOD

# Building for Big Industries

THIS is a book of Austin Photo-facts. It is a picture book of the larger operations of The Austin Company in every important industrial field, and a few office buildings and special structures. It illustrates the scope of Austin service and shows better than descriptions how this service embraces every need of the large manufacturer for engineering, building, and equipment.

The illustrations on the following pages show many of the country's largest plants; they show gigantic steel structures, reinforced concrete operations of vast importance, many complete railroad terminals, including round houses, power houses and railroad shops of every type. There are also illustrated many examples of Architectural structures including beautiful office buildings, complete institutions, and university buildings.

Taken as a whole these illustrations represent evidence of engineering, building, and equipment ability that can be successfully applied to every type of industrial and railway construction. They indicate too a knowledge of complete plant layout, production processes, plant operation and a proper interpretation of the owners' requirements.

Nearly 50 years of building experience is represented by these construction operations. They have played a part in construction history and trace the country's progress in the standardization of building methods. They are examples of economy combined with efficiency.

Equipment is an equally important phase of Austin service. It will be seen by the various descriptions that Austin engineers have assumed complete responsibility in many instances for the purchase and installation of all equipment. Many of these large plants have been delivered to the owner ready for immediate operation. In other cases this work has been carried on in co-operation with the plant engineers—the objective being to deliver the best result for the least amount of the owners' time and money.

Under each illustration will be found short concise descriptions in which the owners' problems are presented together with a brief explanation of the Austin Method in which these problems have been met. An interesting story of Austin service will be found in these descriptions.

Every construction operation, whether large or small, has its individual conditions and problems. Only the broadest type of experience can meet them.

That Austin engineers have this experience and can meet your problems is proved by Austin performance as pictured in this book. Consultation will involve no obligation. Austin offices are located in every industrial section of the country. The service is world-wide. You can quickly arrange for a conference by phone, wire or mail. Austin literature pertaining particularly to your industry will be gladly sent upon request.

THE AUSTIN COMPANY, CLEVELAND



CHICAGO · DETROIT · NEW YORK · DALLAS · SEATTLE  
ST. LOUIS · PITTSBURGH · PHILADELPHIA · BIRMINGHAM  
THE AUSTIN COMPANY OF CALIFORNIA, LOS ANGELES



PLATE 7

Plant of the Hooker Electro-Chemical Company, Niagara Falls, N. Y. Manufacturers of caustic soda and chlorine for the textile and paper industries. Austin contract included a power house, a cell house, an evaporation building, a chlorinator building, a distillation building, and various tanks and small buildings, as well as the installation of complex electro-chemical equipment.

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Built during severe winter weather in rapid time, to meet unusual demands for increased production. This is one example of Austin construction and equipment service in the chemical industry involving many varieties of construction and equipment trades. The Austin Company has built and equipped many complete chemical plants in different sections of the country.

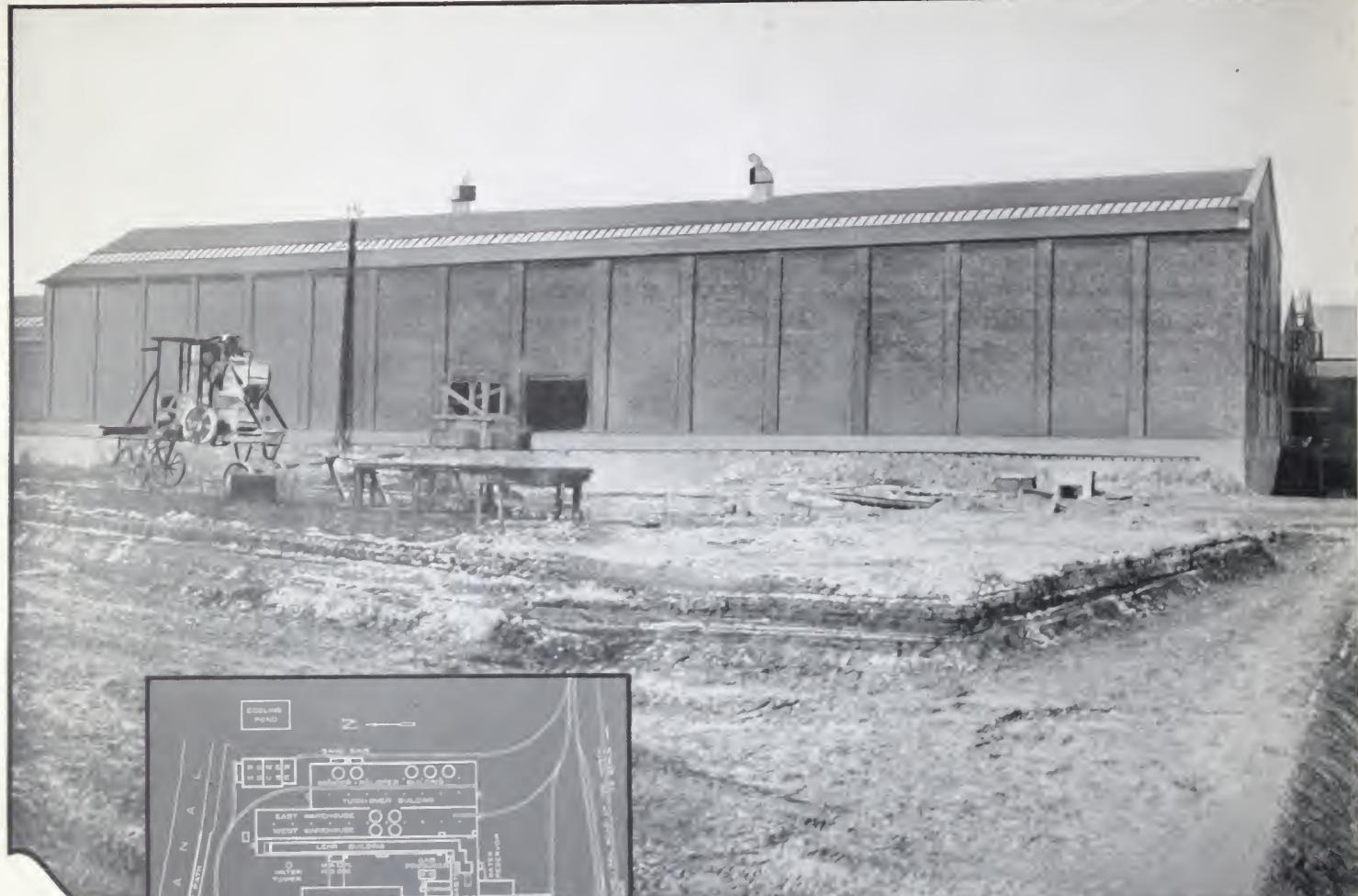
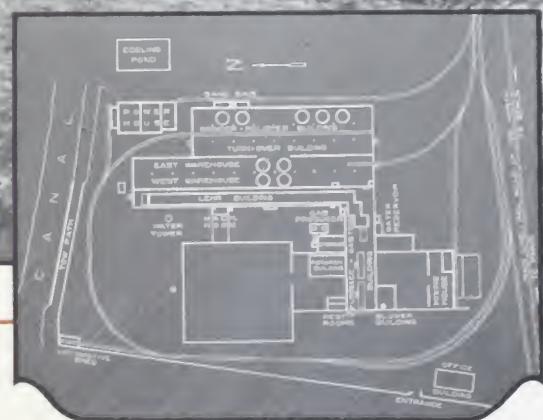


PLATE 3



Manufacture de Glaces de Maubeuge Rousies.  
An Austin-built glass plant in Northern France.  
The original plant was destroyed during the  
World War, and this contract was the first one  
awarded in France to an American construction

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**AUSTIN METHOD**



company after the Armistice. It was necessary to manufacture brick on the job and to overcome innumerable difficulties in this devastated area in beginning work so soon after the cessation of war. The materials were assembled from all parts of France, England, Sweden, Norway, and the United States. The construction supervisors and engineers were Austin men from the United States, and the construction forces were recruited mostly from France, Belgium and England.



PLATE 4

Ludlum Steel Co., Watervliet, N. Y., large manufacturers of alloy tool steel. The Austin contract included a rolling mill building with travelling cranes of 2, 5, and 10-ton capacity, a melting building, a building for charging and storing trucks and power equipment, a concrete reservoir 90' x 200' for cooling water, all foundations for mills and electric furnaces, reinforced concrete storage bins, a railroad trestle, extensive grading and track work and the installation of much of the equipment.

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PLATE 5



At Elizabethport, N. J., The Austin Company has erected a large Austin No. 4 Standard saw tooth building 200 ft. x 600 ft. and an Austin No. 8 Standard Building of Mill Type Construction 3 stories high, 60 ft. x 600 ft. They are exceptionally well-lighted and ventilated, thus insuring accurate production for which they were designed. The mechanical equipment, including a complete heating system, underground water supply system for sprinklers and domestic service, as well as all lighting and plumbing equipment was installed by The Austin Company.



PLATE 8

Eight hundred million match sticks per day are produced at the Log Supply Company, Ltd., Berthierville, near Montreal, Quebec. Several large manufacturers of matches obtain their match splints from this plant. The main building is 530 ft. x 320 ft. The Warehouse is an Austin No. 3 standard, 320 ft. long. The site, which is on the banks of the St. Lawrence, was entirely flooded during the severe winter of 1919-1920 and the water rose to within 6 inches below floor level. The layout of buildings, the erection and the installation of manufacturing equipment at this complete plant was included in this Austin operation at a cost of over \$2,000,000.

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PLATE 7



International Motor Company, well-known manufacturers of "Mack" trucks—a repeat customer. The original contract with this firm called for the erection of an Austin Standard No. 3 building 460 feet long which was completed in 34 working days. The second contract included a two-story office building 80' x 300' and a special saw tooth building 300' x 540', with a bay spacing of 40' x 75'. This building is remarkable in that the columns are widely spaced, having one column for every 3000 sq. ft. of floor space.



PLATE 8

American Engineering Co., Philadelphia, Pa., are manufacturers of Taylor Stokers and special machinery. Their new plant shown here is entirely Austin designed and built. It is a combination of Austin Standard buildings, including an erection shop, a machine shop of saw-tooth type, and a storage building having a 15-ton crane runway for combined building and yard service with automatic doors for the crane when entering the building. The American Engineering Co. is a repeat customer, having awarded The Austin Co. three different contracts.

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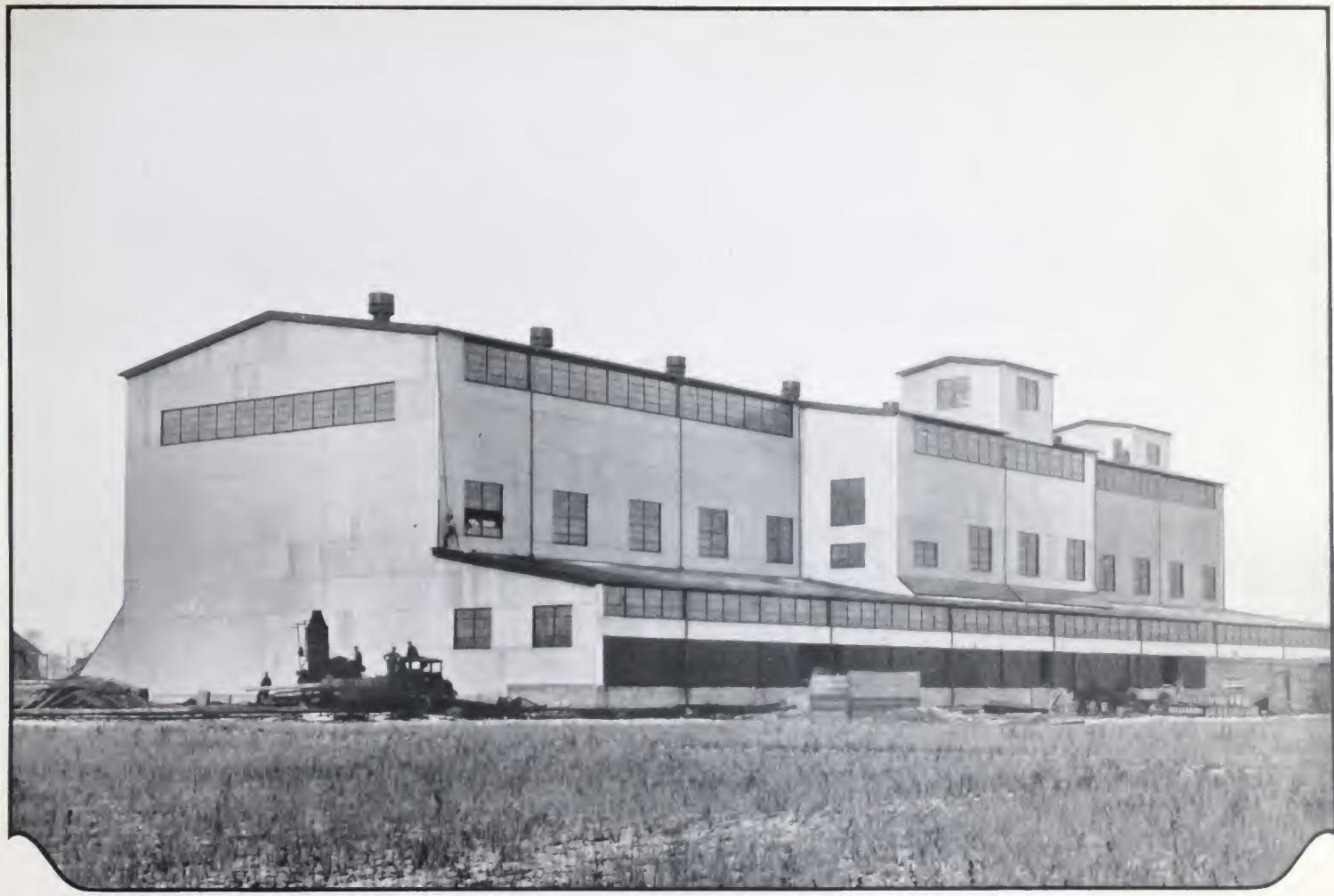


PLATE 9



This modern crane type steel frame fertilizer plant of Darling & Co. at East St. Louis, consists of a main storage building, an acidulating plant, an acid storage tank, a bag room, a concrete rock storage silo, a garage, a machine shop, an office building, side tracks and mechanical equipment. The side walls are of corrugated asbestos for resisting acids and fumes. The Austin contract included the supervision of the installation of heating, lighting, plumbing, revolving dens, and crushing machinery equipment.



PLATE 10

The American Refractories Co., Baltimore, Md. The buildings were designed under supervision of owners' engineers and built and equipped by Austin. The contract called for completion in 75 working days, and the buildings were finished on time and ready for immediate operation.

Chemical Products Co., Ltd., Trenton, Ontario, a complete crane operated acid phosphate plant, is illustrated below. Austin designed, built and equipped the entire plant. The project was completed at \$40,000 below the owners' estimated appropriation.



PLATE 11



PLATE 12



The illustration above shows the plant of the Gartland-McCarthy Foundry Company, at Chicago. It is considered the most efficient of the 17 plants operated by these large foundry interests. The engineering, building, and equipment were included in the Austin contract.

The illustration below shows the complete new branch plant for the manufacture of Flex-a-Tile shingles and roofing material at Chicago, designed, built, and equipped by Austin. There are six buildings, two concrete silos, three steel tanks, and sidetrack facilities as shown in plot layout.



PLATE 13

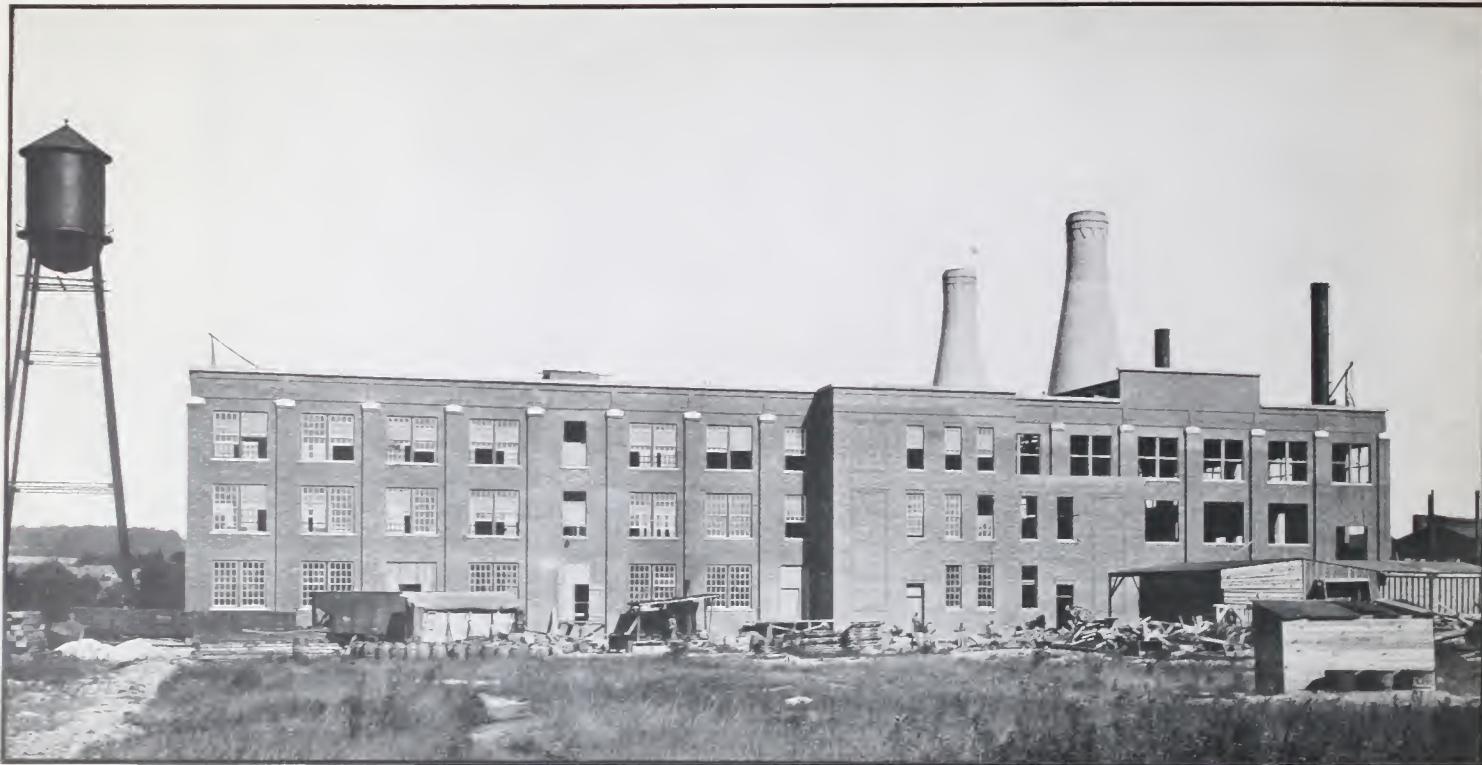


PLATE 14



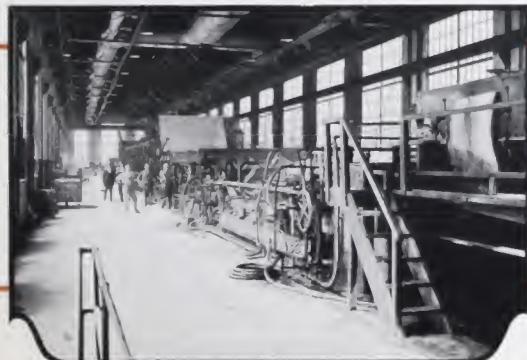
The Niles Glass Works of the National Mazda Lamp Works, General Electric Co. This plant, designed, erected, and equipped by The Austin Company sets a new standard in this industry, proving to be a highly efficient, healthful and attractive plant for blowing electric lamp bulbs.

In the glass industry The Austin Company has many clients; among them are the General Electric Company, Corning Glass Works, H. E. Fry Glass Company, American Plate Glass Company, Pilkington Brothers, Ltd., and Dominion Glass Company. The smaller illustration shows the interior of furnace room at Niles, Ohio.





PLATE 15



The Austin Company designed, constructed, and equipped complete one of the most modern paper plants in the Miami Valley for the Chillicothe Paper Company, at Chillicothe, Ohio. The main building is of reinforced concrete two and three stories high. The paper machine room is two stories reinforced concrete and steel frame while the washing pulp building is three stories high. Note well-lit and ventilated interior of paper pulp room with over-head traveling crane. Austin has served other well-known paper manufacturers; some are as follows: Hammermill Paper Co., A. P. W. Paper Co., Peninsular Paper Co., Carrollton Parchment Co., Hindle & Dauch Paper Co.



PLATE 16

The Morgan Engineering Co., Alliance, O., is well known as a manufacturer of electric overhead travelling cranes, rolling mill machinery, presses, hammers and heavy machinery. This is a view of their erecting shop, designed, built, and equipped by Austin. It carries a 100-ton crane on the upper runway, with 25-ton and 40-ton cranes on the lower runway. This building was erected in quick time to meet emergency expansion, and is giving complete satisfaction. Additional contracts for machine shops, warehouses, forge shop, and large additions to their steel foundry at Canton followed this original order.

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PLATE 17



Erecting shop of the Industrial Works Co., manufacturers of locomotive cranes. This is a modified Austin Standard No. 7 Building. Pile driving was necessary, due to extraordinary foundation conditions. A feature of this building is the number of 11b cranes which were installed and so arranged by The Austin Company that they would not interfere with the operation of the travelling crane. The building was designed, built, and equipped by The Austin Company in 70 working days.



PLATE 18

The Jarecki Chemical Plant at Cincinnati, Ohio, for the manufacture and storage of fertilizer, is a modern steel frame, crane-operated building, 135 x 500 feet with a 60-foot clearance under the truss. This building was erected over an existing building as you will note in illustration. Over 1100 tons of steel were used in the construction of this plant. Equipment was installed by Austin Engineers. The electrical equipment was designed and installed by The Austin Company, and is of the most modern type.

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AUSTIN METHOD

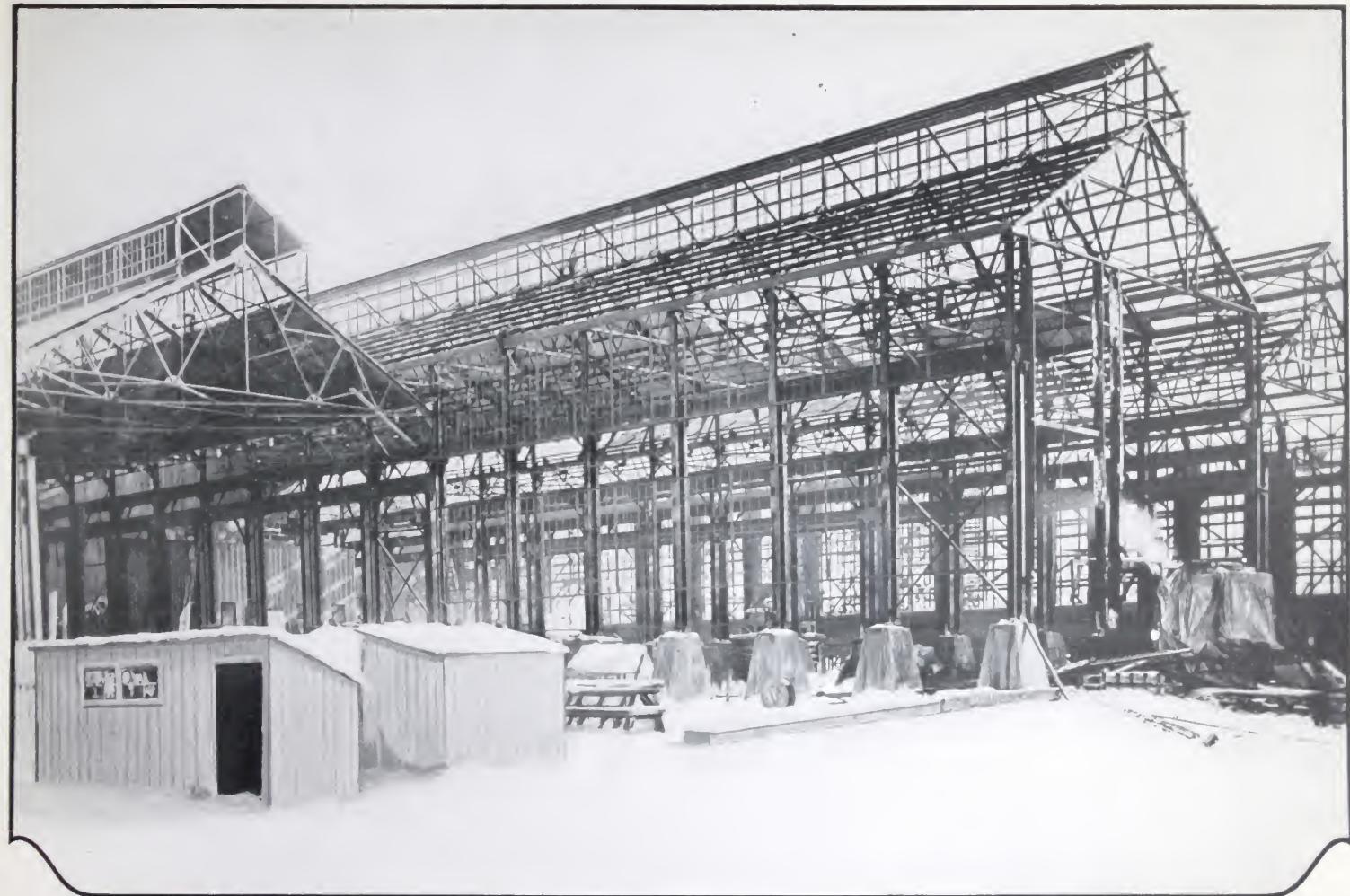


PLATE 19



Edgewater Steel Co., Pittsburgh, Pa. Well-known manufacturers of locomotive tires, rolled steel car wheels and steel castings. Another well-satisfied client in the railway equipment field. The Austin Company designed, built, and equipped a heat treating building, an open hearth building, a forge shop, besides several additions to existing structures. The entire operation was carried on during the severe winter of 1917.

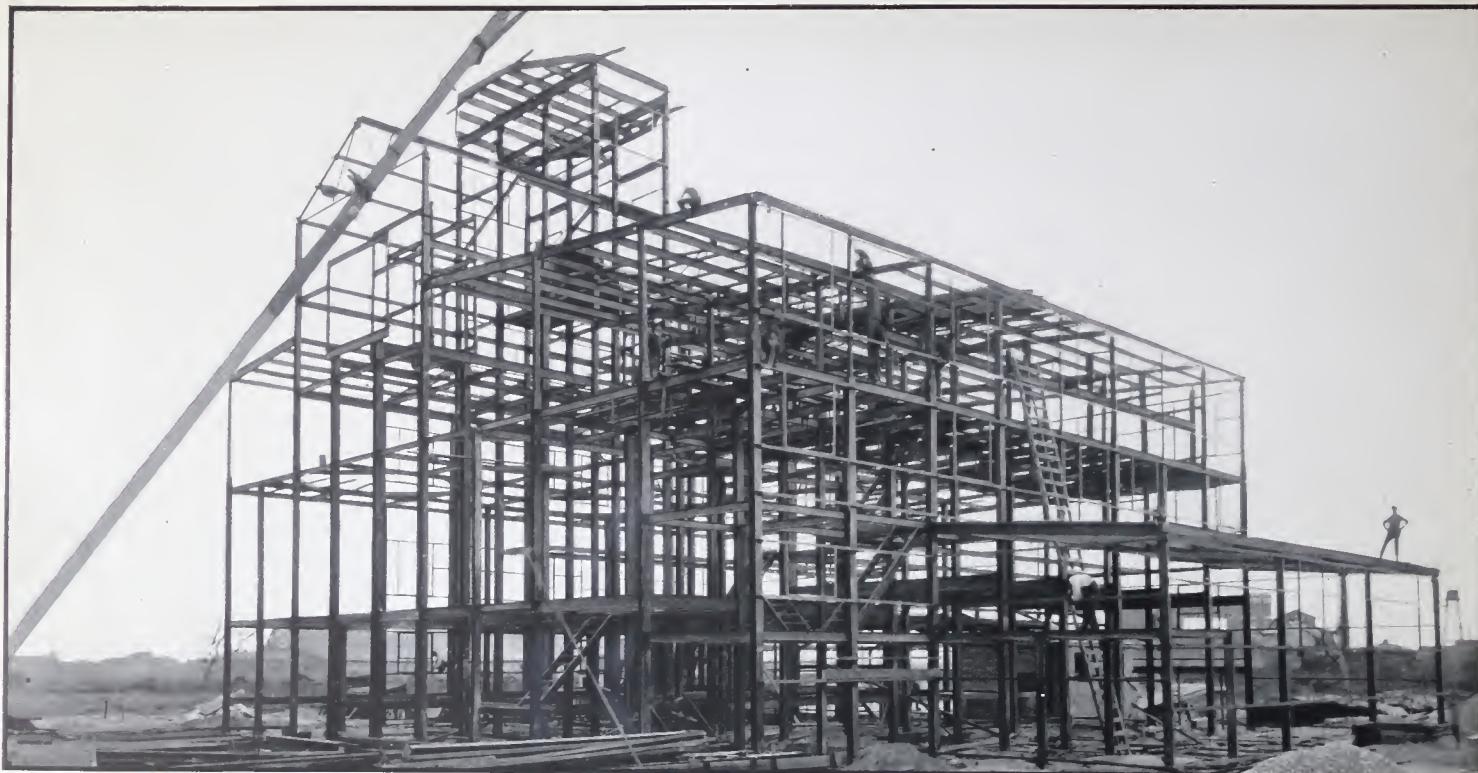
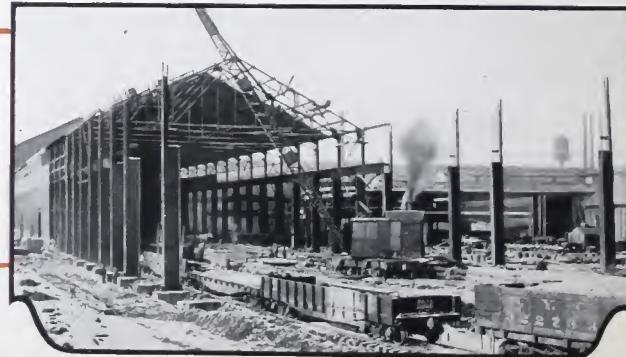


PLATE 20



Above is shown a large mono-calcium plant built by The Austin Company at Charleston, S. C. It consists of a 7-story purification building, a powerhouse, drying kilns, a rock crushing plant and a concrete reservoir.

At the right the Morgan Engineering Co. erection shop under construction, Alliance, Ohio. The owners operated in part of this building long before all steel was erected, because the Austin Building Method permits all trades to work *at the same time*, instead of usual practice of waiting for successive trades to finish.



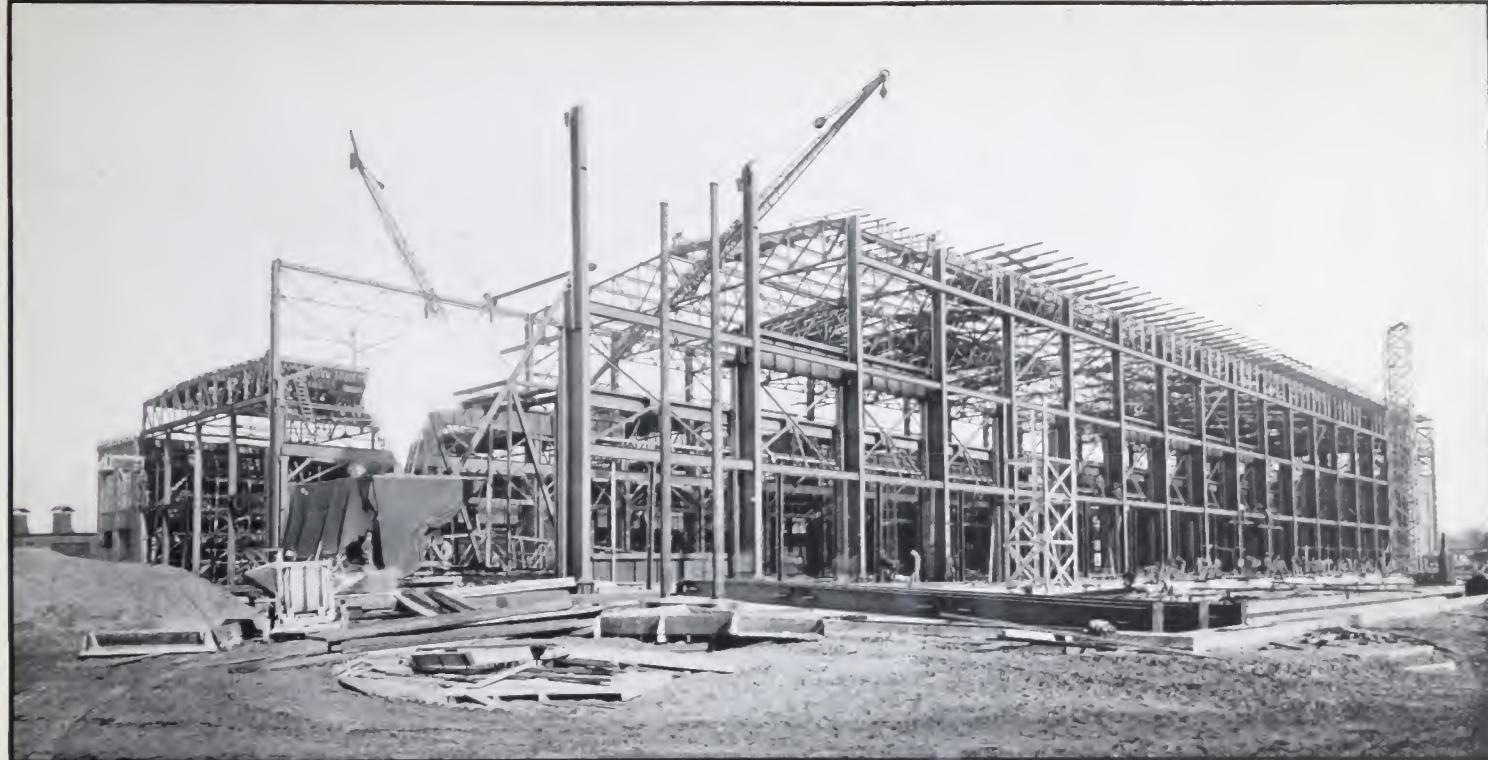


PLATE 21



Above is a construction view of The Pennsylvania Railroad Company's most modern locomotive erecting shop at Logansport, Indiana. This building was designed, built, and equipped, including a 250 ton crane, by The Austin Company. The columns are 70 ft. high and the trusses 90 ft. long.

At the left one of the buildings of the Bourne-Fuller Co., Cleveland, another repeat customer for whom The Austin Company has designed, built, and equipped plants at Cleveland, Cincinnati, and Unionville, Conn., a total of eight contracts in nine years.



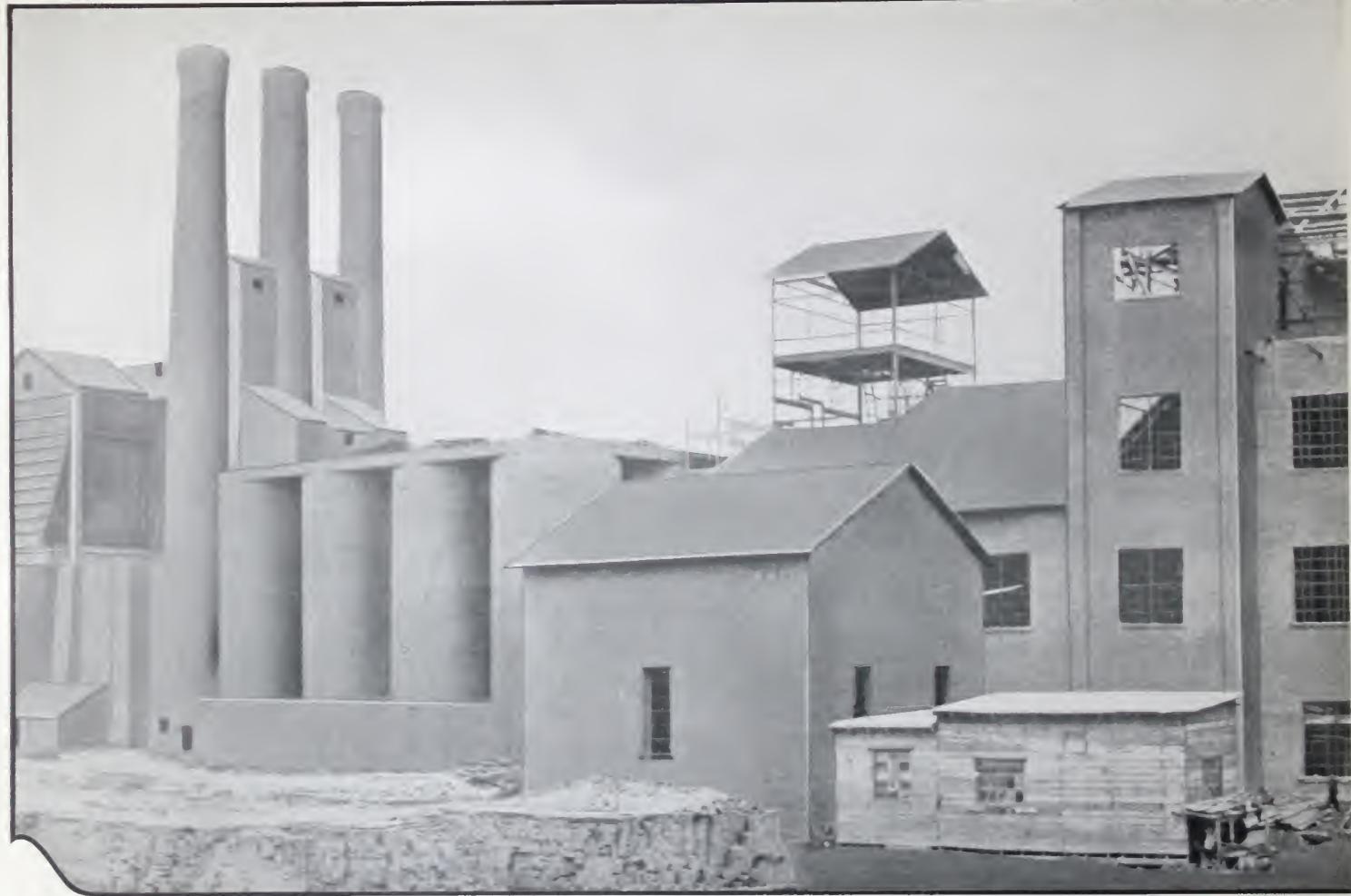
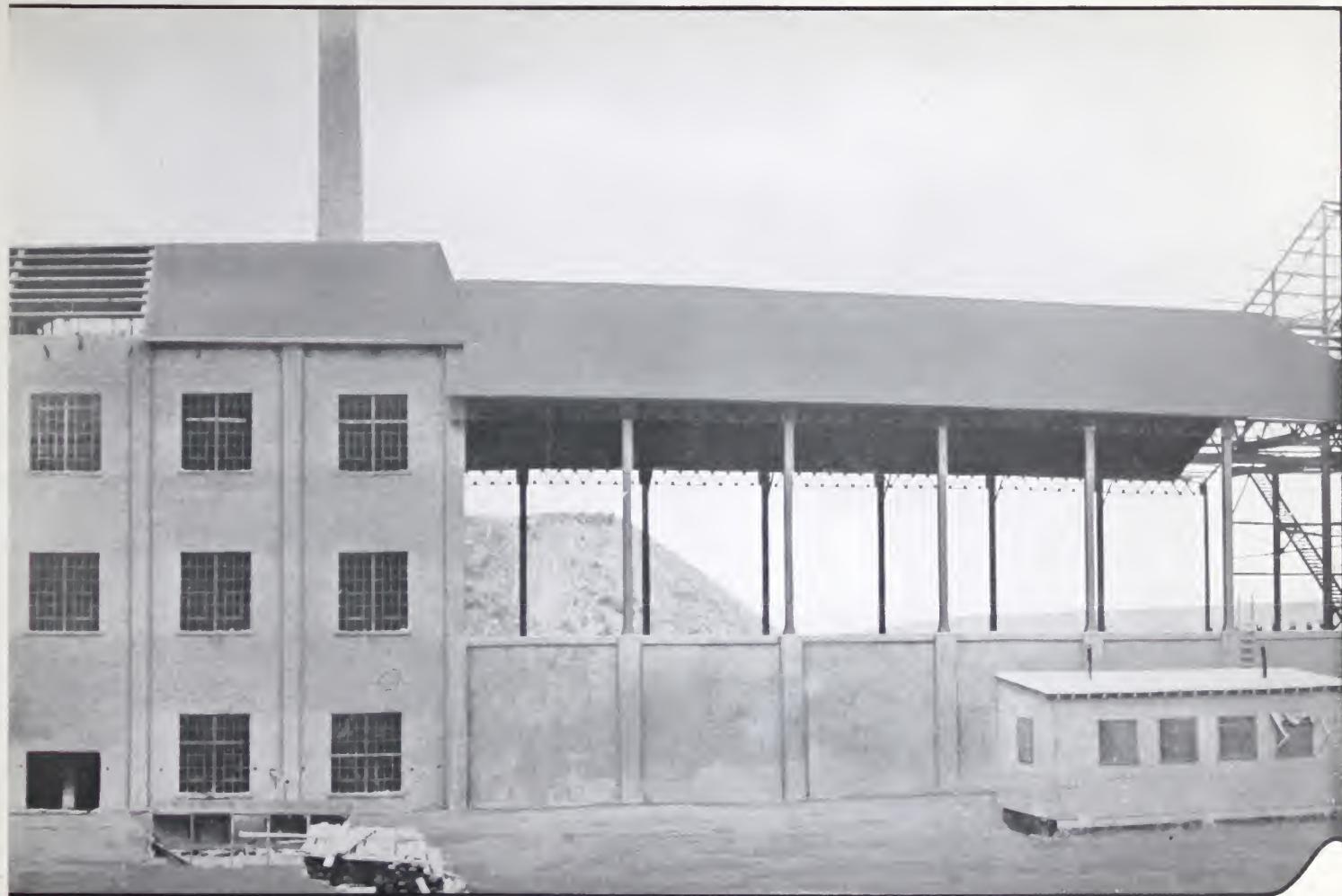


PLATE 22

Plant of the La Salle Portland Cement Company at La Salle, Illinois, built by The Austin Company. The length of the building is 625 ft. with widths varying from 50 feet to 120 feet. This operation included the erection of 16 circular reinforced concrete bins 20 feet in diameter and 40 feet deep, set on piers 11 feet high. A large amount of cement mill machinery was installed by The Austin Company.

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Other Austin operations in the cement industry are for the Western States Portland Cement Co., Independence, Kansas, the California Portland Cement Co., Colton, California, and the Bessemer Limestone and Cement Co., Youngstown, O. The Austin organization is prepared to assume full responsibility for complete plants, of any size, additions or extensions anywhere in the United States or abroad.



PLATE 23

American Graphophone Company, Bridgeport, Conn., where the famous Columbia Records are manufactured. The large building is of reinforced concrete construction 80 ft. x 440 ft. A special building was erected on the roof of one building for testing records and a special tunnel built under it. A repeat contract for another building, 40 x 440 ft., 3 stories, at another plant of this company, followed. These buildings were built and completely equipped by The Austin Company.

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AUSTIN METHOD



PLATE 24



The H. B. Gordon Company, New York City. Austin No. 9 reinforced concrete building constructed for the manufacture of children's dolls. The Austin Company has designed, built, and equipped many buildings of the reinforced concrete type. They are to be found in all parts of the country from California to Maine.



PLATE 25



One of the largest complete refineries in America, located at Toledo, O. All crude stills and pressure still foundations were constructed demonstrating Austin ability on heavy concrete foundation and tunnel work. An Austin No. 2 standard building for field equipment storage, and pumping and receiving buildings were also included in the Austin contract.

Austin has furnished buildings in Turkey, Greece, and Bulgaria; also for the Standard Oil Co. of La., Shreveport, Standard Oil of Calif., Bakersfield, and Standard Oil of Indiana, Whiting. Smaller illustration is birds-eye view of a part of the Toledo refinery.





PLATE 26



Above is shown a modified Austin No. 9 Standard Building at Huntington, W. Va., 80' x 141', four stories high used for warehouse purposes. A typical example of Austin ability on large reinforced concrete construction. A second contract calling for the erection of a large addition to this building was awarded later as evidence of entire satisfaction with Austin Service. Another warehouse of fireproof construction was built for this firm at Philadelphia.

At the left is illustrated a furniture and general merchandise warehouse at Bridgeport, Conn. This building, which is nine stories high, demonstrates Austin ability on large multi-story structures. The Austin Company is prepared to design, build, and equip large and small warehouse projects complete.\*



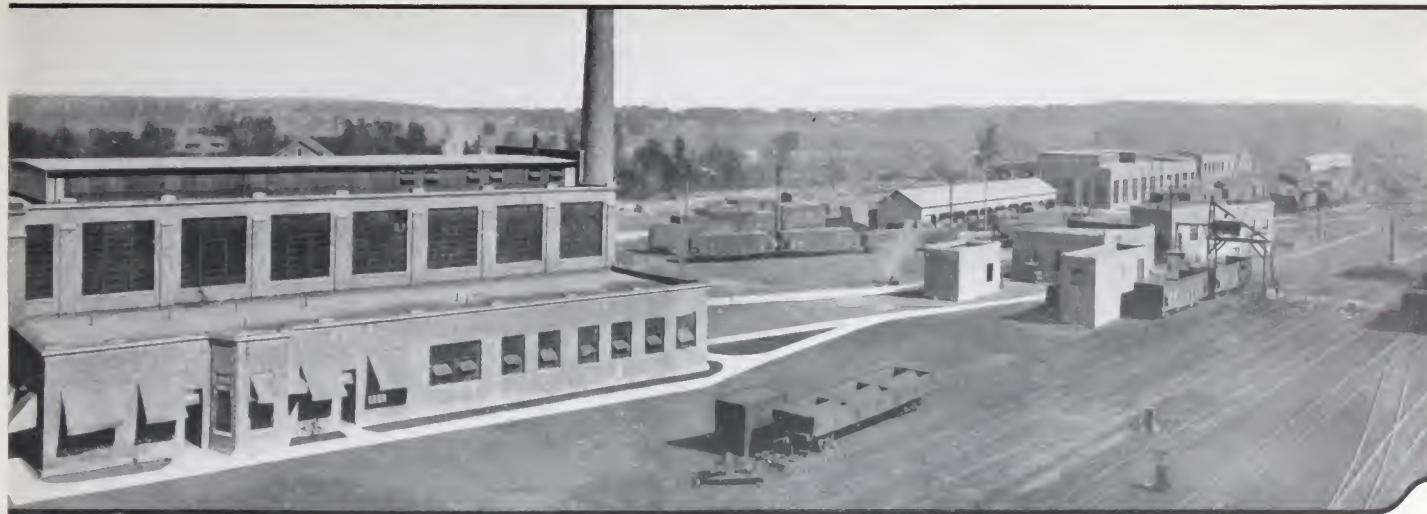
PLATE 27



Richmond Engine Terminal of the Pennsylvania Railroad shown across the top of these two pages, designed, built, and equipped by The Austin Company. The operation includes a 20-stall roundhouse, a boilerhouse, a machine shop, ash pits, inspection pits, a storehouse, an oilhouse, a turn-table pit. The equipment is of the most modern type, having down draft smoke exhaust system carried in tile and concrete ducts underground to the main stack. Large motor driven exhaust fans draw the smoke from the live engines and thereby keep the engine stalls free from smoke and fumes for the workmen.



PLATE 28



The engine terminal of the Pennsylvania Lines, West, at Crestline, Ohio, is shown across the bottom of these two pages. Designed by the Pennsylvania R. R. engineers and completely built and equipped by the Austin Company. It includes a 30 stall roundhouse of structural steel and reinforced concrete construction, a motor-operated turn-table, machine shop, powerhouse, oil storage building, concrete inspection pit building, office and service building, 15-ton travelling crane in roundhouse, 7½-ton gantry crane at ash pits, two 50,000-gallon water tanks, and many other large units of equipment.





PLATE 29

Car paint shop of the American Car and Foundry Company, Chicago, Ill. One of the largest builders of railroad cars in the world. The Austin Company has executed 8 contracts for these well-known railroad equipment manufacturers. Three at Chicago, one at Jeffersonville, Indiana, others at Milton, Pa., Depew, N. Y., St. Louis, and Huntington, W. Va. The car paint shop is of special Austin design, 104 ft. x 720 ft. and was built in 75 working-days. This shop is one of the most modern of its kind in existence.

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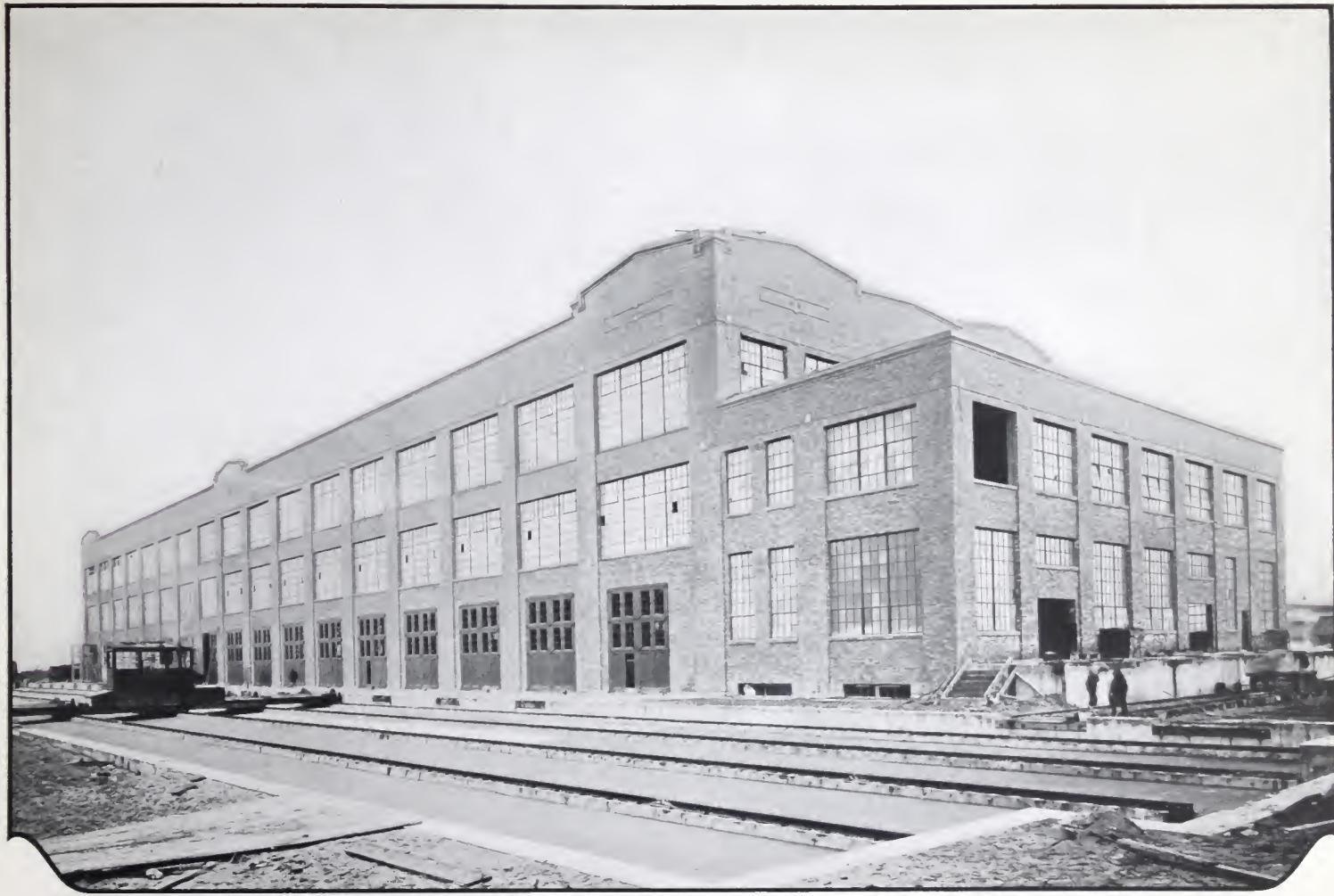


PLATE 30



One of the most modern and efficient locomotive erection shops in the country, containing over 100,000 sq. ft. of floor space, was recently completed for the Pennsylvania Lines, West, at Logansport, Ind., by The Austin Company. There are three main aisles in the erection shop proper, an erection aisle 90 ft. wide with 17 engine pits, a heavy machine aisle 75 ft. wide, and a light machine aisle 30 ft. wide with mezzanine floor. For the erection aisle there is a 250-ton crane with two 10-ton cranes operating at a lower level. This Railroad Terminal was designed, constructed, and equipped complete by The Austin Company.

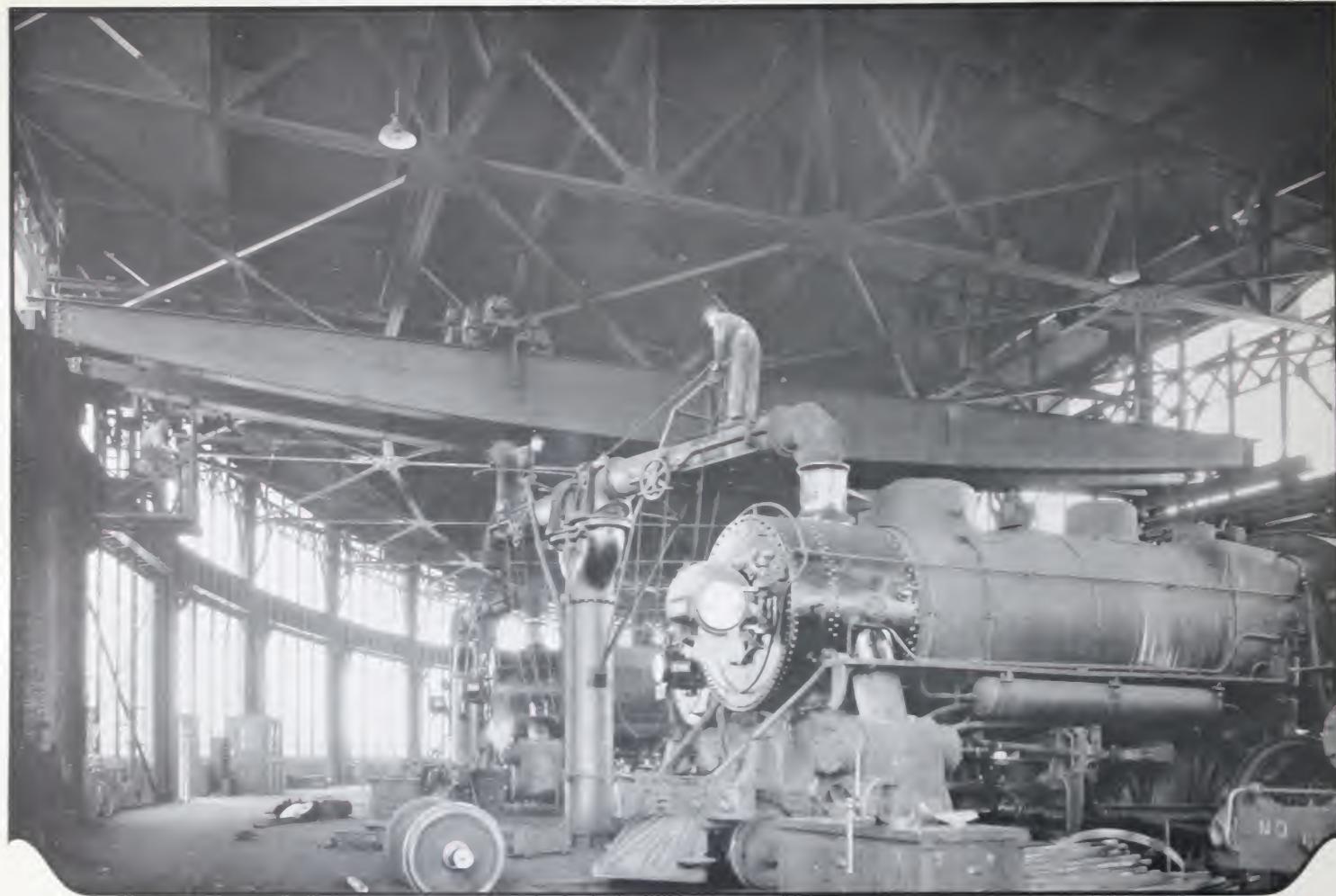


PLATE II

Crestline Terminal 30-stall roundhouse of the Pennsylvania Lines, West, built and equipped by The Austin Company. Note the modern and well-lighted interior, free from smoke. A 15-ton crane with a 75-foot span on a circular track was installed which serves the entire working area and engine pits. The equipment, such as down draft smoke exhaust system, electric cranes, powerhouse equipment, electric wiring both for power and light, and wash-out water equipment was also handled and installed by Austin Engineers.

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PLATE 32



Interior—showing main erecting aisle containing 17 pits—of the Pennsylvania R. R. erecting shop, Logansport, Indiana. The upper crane runway 46 ft. high supports a 250-ton double trolley travelling crane capable of lifting the largest locomotives handled on this division, and on the lower runway is a 10-ton crane for lighter work. The Austin Company designed, built, and equipped a locomotive erecting shop for the Cornwall R. R. at Lebanon, Pa., and another for the Michigan Railways at Saginaw, Mich.



PLATE 33



General Offices of the American Chain Company, Bridgeport, Conn., manufacturers of the famous Weed Tire Chains, "ACCO" railroad track appliances, and industrial chains. Here is an example of ornamental construction by The Austin Company. In addition to this Office Building the contract included a galvanizing plant, a heat treating plant and a maintenance building.

Pennsylvania State College, State College, Pa. A two-story steam Engineering Laboratory built by The Austin Company. This building represents one of several contracts executed for famous colleges in the country.





PLATE 34



Physics Laboratory at Case School of Applied Science, Cleveland, Ohio. Dr. Miller, Professor of Physics, after seventeen years of occupancy and use of the building, believes it the best physics laboratory of its kind and size in this country. The Mining Engineering Laboratory for this college was also Austin-built.

Building for the Automotive-Highways Laboratory of the School of Engineering, University of Pittsburgh at Pittsburgh. The building interior has a clear span and is exceptionally well-lighted. The building was designed, built, and equipped by Austin in 34 working-days, while the scheduled time was 55 working-days.





PLATE E

Minneapolis plant of the National Lamp Works of the General Electric Company at Minneapolis, Minn., completely designed, built and equipped by The Austin Company. This building is an Austin No. 8 Standard, of over 20,000 square feet floor in seven gables. Complete equipment installation is done. Last addition, just included heating, plumbing, lighting, sprinklers, and powerhouse equipment.

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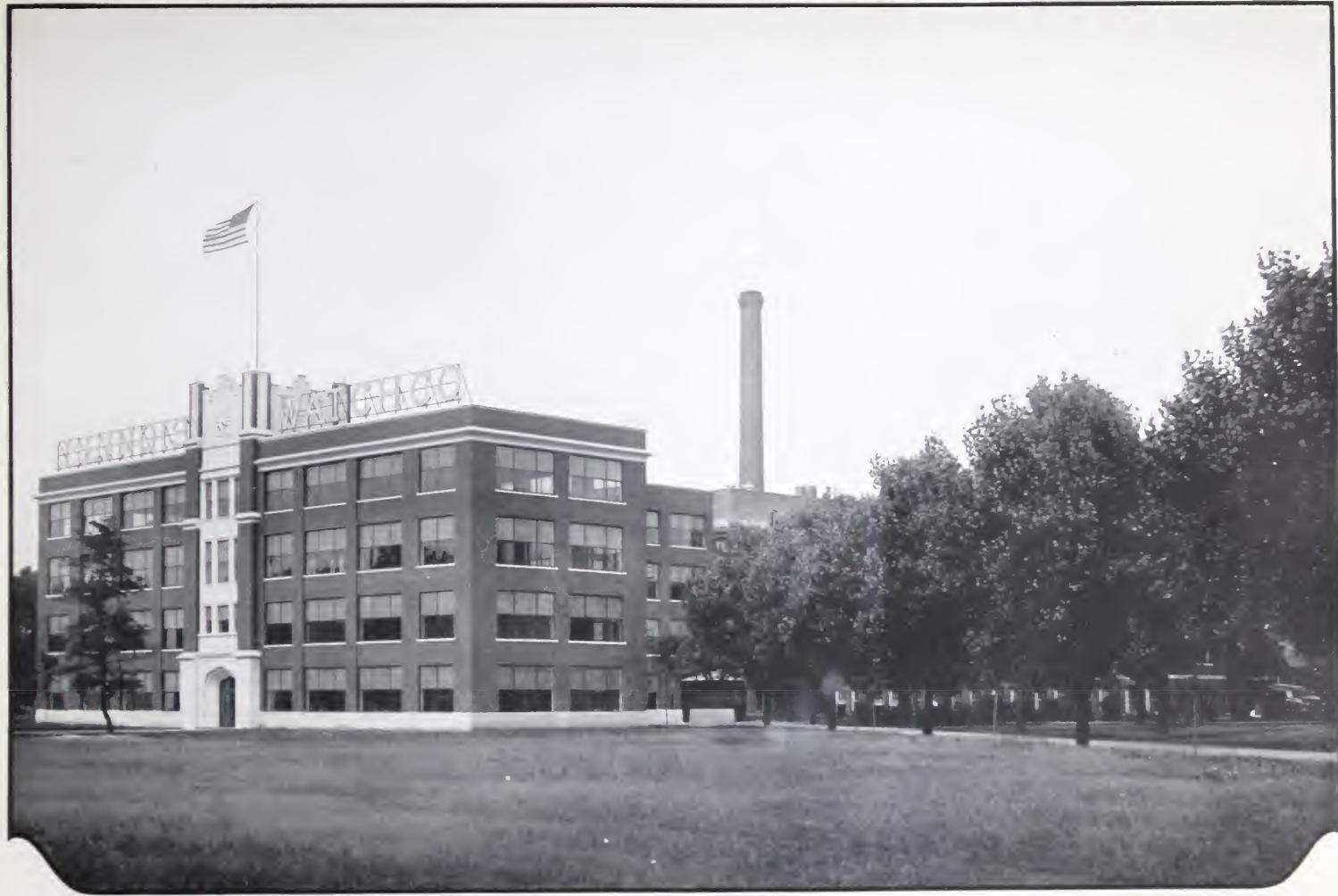


PLATE 36



This building of the Illinois Watch Company at Springfield, Illinois, was designed by Austin architects and built and equipped by The Austin Company. This is the attractive office headquarters of the famous Illinois Watch and is set in the midst of attractive surroundings. A building of pleasing and substantial appearance at moderate cost, an Austin operation from inception to completion giving daily entire satisfaction to its owners.



PLATE 37

Memorial Hall of Mount Union College at Alliance, Ohio. This building was designed to meet an unusual combination of requirements and houses, besides a Memorial Hall, a gymnasium and athletic headquarters, as well as educational facilities. A limited appropriation required careful planning to meet the requirements, and the result was a thoroughly satisfactory building giving ample facilities and attractive appearance, and at a cost considerably less than the appropriation.

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PLATE 38



Research Laboratory at Nela Park, Cleveland, well known as "The Best Kept Plant in America". One of the large group of Austin-built buildings erected for the National Lamp Works of the General Electric Company.



PLATE 39

The Austin Company's Complete Service includes a staff of Architects who have frequently demonstrated their ability to design beautiful and substantial structures or embellished building details that result in a minimum building expense. The illustrations on this page represent examples of Austin ornamental work. Austin Architectural Engineers can offer suggestions for the ornamental treatment of your plant buildings or for your office buildings and other special structures.



PLATE 40



PLATE 41



PLATE 42



PLATE 43

Nela Park powerhouse, Cleveland, built by Austin, architecturally conforming to other Nela Park buildings.



PLATE 45

Power house of Nelite factory, Miniature Lamp Division of National Lamp Works, Cleveland, built and equipped by the Austin Company.



PLATE 44

Railroad Engine Terminal powerhouse for Pennsylvania Lines, Crestline, Ohio, built in connection with complete roundhouse and terminal buildings.



PLATE 46

Curtiss Aeroplane and Motor Corporation, Buffalo, N. Y., designed, built, and equipped in connection with the large Aeroplane manufacturing plant, covering 27 acres, all under one roof.



PLATE 47



PLATE 48



PLATE 49

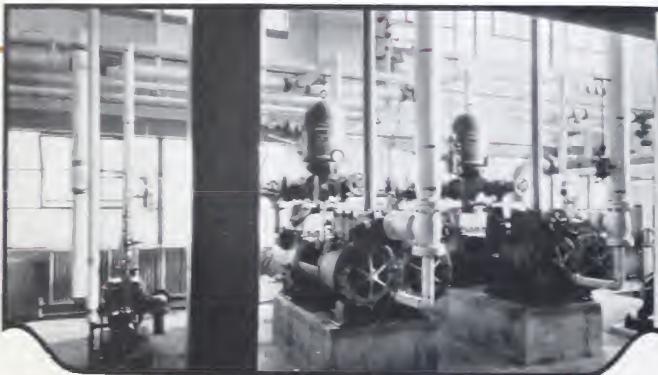


PLATE 50

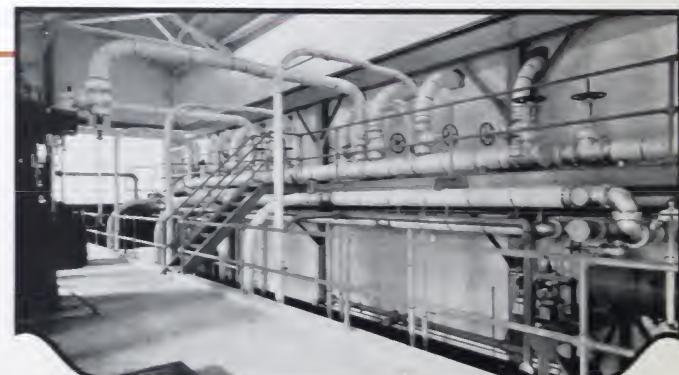
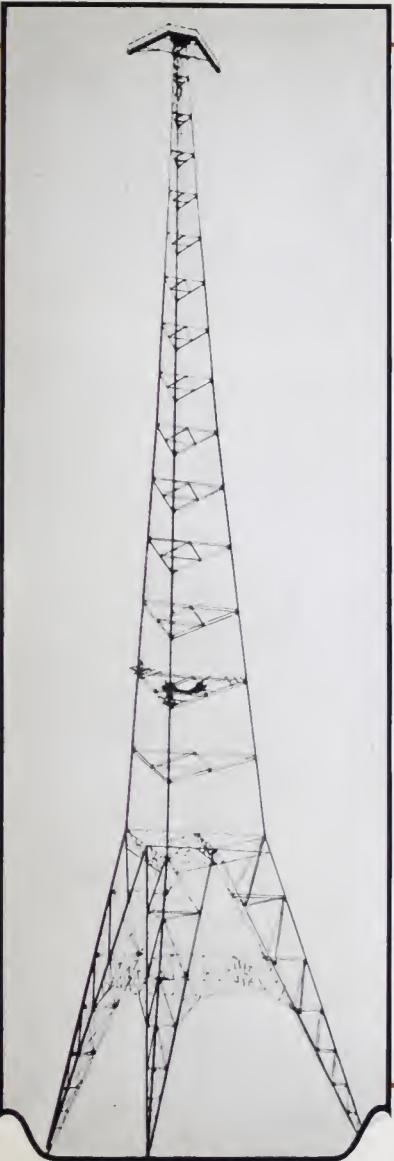


PLATE 51

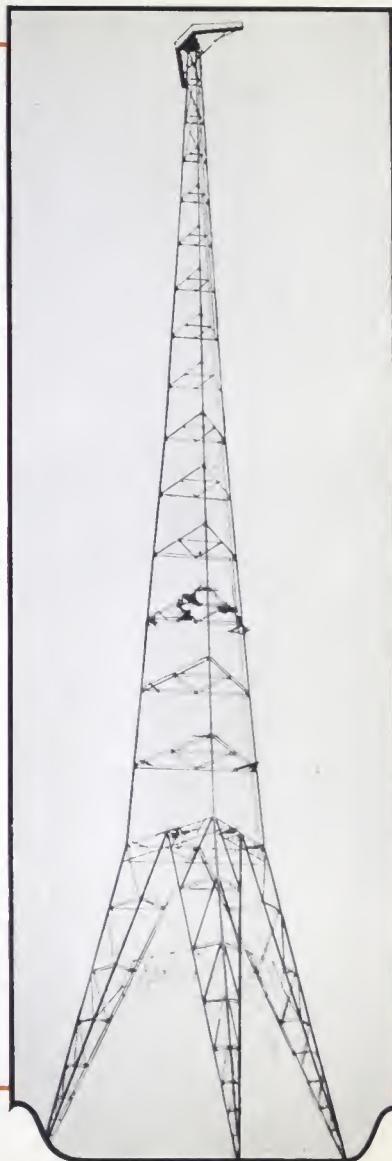
Fire pumps installed in pump room Log Supply Co. plant.



Main steam piping in Engine Room of Log Supply Co. powerhouse.

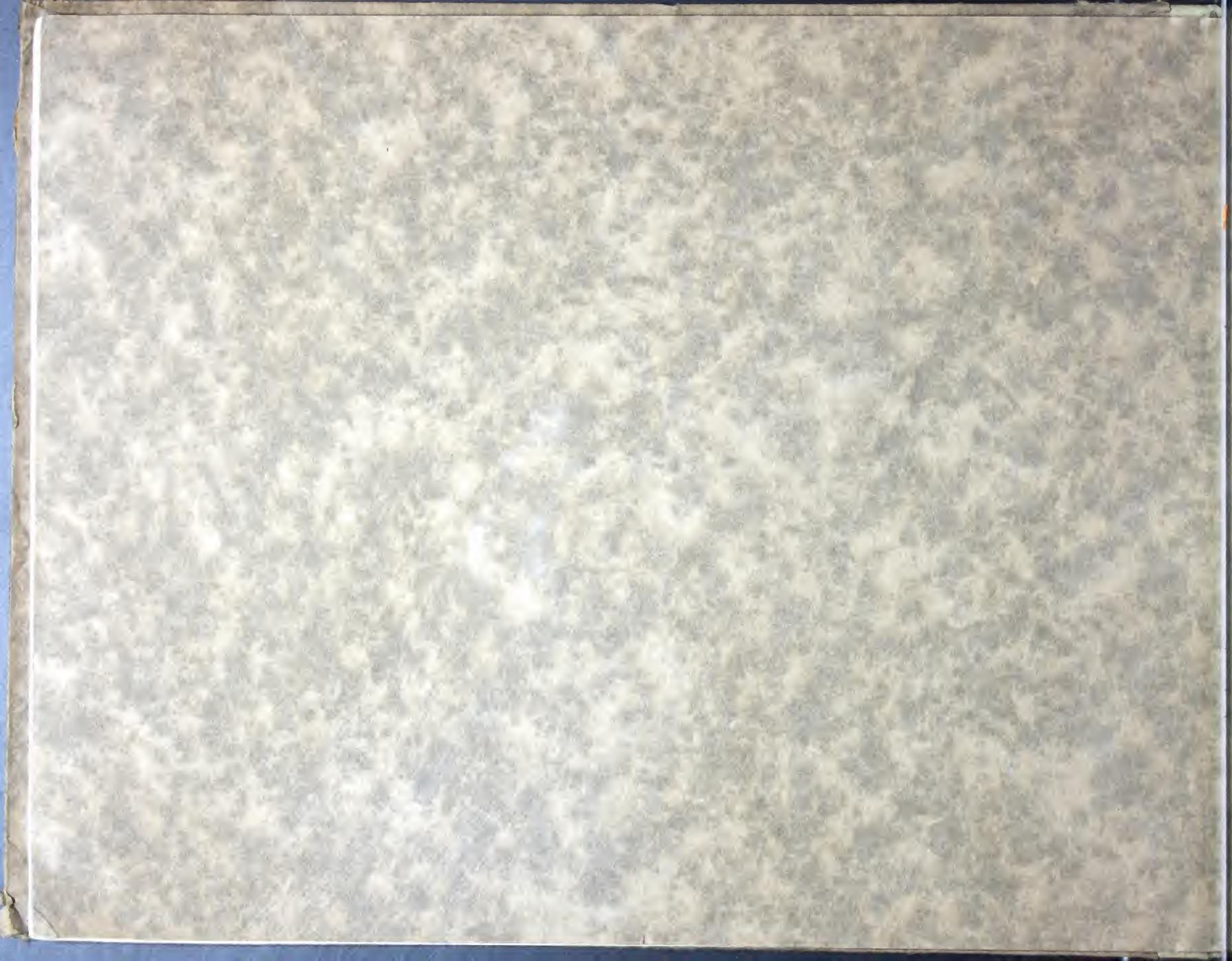


Radio Station towers for the U. S. Navy at Annapolis, Md. There are four towers 600 feet tall and they support antennae for radio service which has capacity for one of the longest distance sending stations in the world. The American Fleet in the Atlantic was directed through this high powered station during the World War.



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